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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No. : 10/753,071 Confirmation No. : 5429
First Named Inventor : Tadashi NARITA
Filed : January 8, 2004
TC/A.U. : 1713
Examiner : H. S. Hu

Docket No. : 038788.53145US
Customer No. : 23911

Title : Fluorine-Containing Compounds, Fluorine-
Containing Polymerizable Monomers, Fluorine-
Containing Polymers, Dissolution Inhibitors, and
Resist Compositions

REQUEST FOR FURTHER CONSIDERATION

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants respectfully request continued examination of the above identified patent application in light of the Reply to Office Action submitted September 18, 2006 as well as the following additional remarks.

The Advisory Action mailed September 28, 2006 states in pertinent part: "Applicants may have presented some very useful evidence and may be with unexpected result possible overcome of 103 rejections. However, it will take more time to check for full consideration of this critical situation." The Advisory Action further states: "The Examiner will need more time to reconsider the use of USPG-PUB 2003/0232040 A1 to Komoriya...." These statements and others in the Advisory Action seem to indicate that the Examiner was not able to completely consider their previously submitted Reply. Applicants therefore respectfully request that a full and complete consideration be given to their previously submitted Reply in addition to the following additional remarks.

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Applicants again request reconsideration of the Restriction Requirement. The Examiner states that there are several reasons why monomer/polymer is quite different subject matter from small organic compound. The restriction requirement seeks to separate claim 1 from claim 4 (which is drawn to polymerizable monomers) and claim 11 (which embraces polymers formed from the monomers of claim 4). As is proper, the Examiner seems to have no problem examining both claim 4 and claim 11 in the same application. It is therefore inexplicable why claim 1, which embraces both the monomers of claim 4 and the polymers of claim 11 should not be examined together with the claim to which it is generic. The Examiner's attention is directed to M.P.E.P. §809.03 which explicitly states that "[t]here are a number of situations which arise in which a n application has claims to tow or more properly divisible inventions, so that a requirement to restrict the application to one would be proper, but presented in the same case are one or more claims (generally called "linking" claims) inseparable therefrom and thus linking together the inventions otherwise divisible." Indeed, claim 4 differs from claim 1 in requiring that the claimed compounds be polymerizable monomers, whereas claim 1 embraces both polymerizable and nonpolymerizable (e.g., already polymerized) compounds. There simply is no proper basis for the restriction requirement in the instant application. Instead, as pointed out in M.P.E.P. §809.03, the presence of linking claim 1 links together the various narrower claims falling within its generic scope. Thus, reconsideration and withdrawal of the restriction requirement are respectfully requested.

Obviousness Rejection

As previously pointed out, the primary references of Ohmori and Suzuki disclose compounds which are structurally different form the presently claimed compounds. Ohmori and Suzuki each disclose a polymer comprising the structural moiety -O-R¹-CF₂-CF(CF₃)OR². In contrast, the claims of the present

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application require the fluorine-containing compound to include the structure represented by formula 1, i.e., $-O-R^1-CF_2-\underline{CH}(CF_3)OR^2$. The rejection attempts to overcome this difference by asserting that Mowrer teaches the interchangeability of hydrogen for fluorine. Applicants respectfully disagree. Mowrer discloses fluoroalcohols that can undergo polycondensation reactions at a reactive hydroxyl group with silicon compounds to form an Si-O-C bond. While it is true that some of Mowrer's fluoroalcohols contain hydrogen in a location where others contain fluorine, this is in no way a general teaching of equivalence between hydrogen and fluorine. At most it is a teaching that hydrogen and fluorine may be equivalent in hydroxyl group-containing compounds as pertaining to the reactivity of the hydroxyl group toward silicon atoms. That does not amount to a teaching of equivalence in the different context of the presently claimed invention. To the contrary, in the context of the present invention, $-CH-$ and $-CF-$ are not functional equivalents because resist compounds having the structure $-O-R^1CF_2-\underline{CF}(CF_3)OH$ have an unsuitably high water repellency and too low a solubility in alkali aqueous solutions and therefore swell in an alkali developing solution and cannot produce a fine resist pattern, whereas compounds with the claimed structure produce excellent resists.

The superiority of the claimed compounds to form resist compositions is an unexpected and surprising result that further indicates the non-obviousness of the presently claimed invention. Evidence of this superiority is found, *inter alia*, in Example 9 at paragraph [0059] of the specification. This unexpected superior result deserves full consideration, and when so considered, leads to the conclusion that the present invention is not obvious in view of Ohmori, Suzuki or Mowrer or any combination thereof. Reconsideration and withdrawal of the rejection are therefore respectfully requested.

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Conclusion


In view of the foregoing, as well as the previously submitted Reply of September 18, 2006, the application is respectfully submitted to be in condition for allowance, and prompt favorable action thereon is earnestly solicited.

If there are any questions regarding this response or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket # 038788.53145US).

Respectfully submitted,

April 18, 2007




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Certificate of Facsimile Transmission

The undersigned hereby certifies that this Request for Further Consideration together with the accompanying Petition for Extension of Time and Request for Continued Examination are being transmitted to the U.S. Patent and Trademark Office by facsimile transmission to (571) 273-8300 this 18th day of April 2007.



J. D. Evans